



## INFORMATION DISCLOSURE CITATION

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Docket Number (Optional)

02560045PA

Application Number

10/714,929

Applicant(s)

T. Rappaport

Filing Date

11-18-03

Group Art Unit

unknown

2612

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
/TM/	1	4,675,147	6-23-87	Schaefer et al.			4-6-83
	2	4,736,453	4-5-88	Schloemer			12-10-85
	3	4,885,694	12-5-89	Pray et al.			4-29-87
	4	5,111,392	5-5-92	Malin			6-9-89
	5	5,119,307	6-2-92	Blaha et al.			12-22-89
	6	5,239,487	8-24-93	Horejsi et al.			10-24-90
	7	5,293,640	3-8-94	Gunmar et al.			
	8	5,307,261	4-26-94	Maki et al.			6-28-91
	9	5,337,149	8-9-94	Kozah et al.			11-12-92
	10	5,339,184	8-16-94	Tang			6-15-92
	11	5,375,123	12-20-94	Andersson et al.			2-5-93

## FOREIGN PATENT DOCUMENTS

REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						YES	NO

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)


EXAMINER

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/TM/	12	5,394,522	2-28-95	Sanchez-Frank et al.			9-13-93
	13	5,450,615	9-12-95	Fortune et al.			12-22-93
	14	5,458,123	10-17-95	Unger			4-29-94
	15	5,465,390	11-7-95	Cohen			2-12-93
	16	5,482,050	1-9-96	Smokoff et al.			2-17-94
	17	5,485,568	1-16-96	Venable et al.			10-8-93
	18	5,491,644	2-13-96	Pickering et al.			9-7-93
	19	5,491,837	2-13-96	Haartsen			3-7-94
	20	5,493,679	2-20-96	Virgil et al.			10-29-93
	21	5,515,269	5-7-96	Willis et al.			11-8-93
	22	5,528,518	6-18-96	Bradshaw et al.			10-25-94

## FOREIGN PATENT DOCUMENTS

REV	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
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## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)


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EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
/TM/	23	5,539,665	7-23-96	Lamming et al.			7-25-94
	24	5,553,312	9-3-96	Gathey et al.			6-20-94
	25	5,553,620	9-10-96	Snider et al.			5-2-95
	26	5,555,354	9-10-96	Strasnick et al.			3-23-93
	27	5,561,841	10-1-96	Markus			
	28	5,564,070	10-8-96	Want et al.			7-30-93
	29	5,594,946	1-14-97	Menich et al.			2-28-95
	30	5,598,532	1-28-97	Liron			10-21-93
	31	5,625,827	4-29-97	Krause et al.			12-23-94
	32	5,636,344	6-3-97	Lewis			8-22-91
	33	5,689,355	11-18-97	Okubo et al.			7-1-96

## FOREIGN PATENT DOCUMENTS

REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
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## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)


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/TM/	34	5,761,093	6-2-98	Urbish et al.			5-8-97
	35	5,794,128	8-11-98	Brockel et al.			9-20-95
	36	5,799,154	8-25-98	Kuriyan			6-27-96
	37	5,809,282	8-15-98	Cooper et al			6-7-95
	38	5,815,395	9-29-98	Hart et al.			6-29-95
	39	5,828,960	10-27-98	Tang et al.			3-31-95
	40	5,831,610	11-3-98	Tonelli et al.			2-23-96
	41	5,832,389	11-3-98	Dent			4-3-96
	42	5,861,887	1-19-99	Butler et al.			12-5-95
	43	5,867,112	2-2-99	Kost			5-14-91
V	44	5,877,777	3-2-99	Colwell			4-7-97

## FOREIGN PATENT DOCUMENTS

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## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

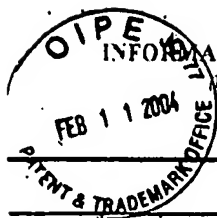

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2612

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
/TM/	45	5,878,328	3-2-99	Chawla et al.			12-21-95
	46	5,907,850	5-25-99	Krause et al.			1-21-97
	47	5,917,808	6-29-99	Kosbab			1-17-97
	48	5,923,850	7-13-99	Barroux			6-28-96
	49	5,926,762	7-20-99	Arpee et al.			5-17-96
	50	5,940,196	8-17-99	Piehler et al.			5-16-97
	51	5,945,976	8-31-99	Iwamura et al.			12-10-96
	52	5,948,055	9-7-99	Pulsipher et al.			8-29-96
	53	5,949,335	9-7-99	Maynard			4-14-98
	54	5,949,988	9-7-99	Feisullin et al.			4-3-97
↓	55	5,953,669	9-14-99	Stratis et al.			12-11-97

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2612

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EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
/TM/	56	5,963,867	10-5-99	Reynolds et al.			8-16-95
	57	5,970,406	10-19-99	Komara			12-31-96
	58	5,987,328	11-16-99	Ephremides et al.			4-24-97
	59	6,006,021	12-21-99	Tognazzini			7-1-96
	60	6,018,625	1-25-00	Hayball et al.			8-27-97
	61	6,021,316	2-1-00	Heiska et al.			
	62	6,032,105	2-29-00	Lec et al.			7-31-97
	63	6,038,547	3-14-00	Casto			1-7-98
	64	6,044,273	3-28-00	Tekinay			12-10-96
	65	6,058,102	5-2-00	Drysdale et al.			11-6-98
	66	6,058,262	5-2-00	Kawas et al.			4-18-97

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2612

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/TM/	67	6,059,842	5-9-00	Dumarot et al.			4-14-98
	68	6,061,722	5-9-00	Lipa et al.			12-23-96
	69	6,075,541	6-13-00	Maclinovsky			11-7-97
	70	6,088,522	7-11-00	Lee et al.			7-31-97
	71	6,104,699	8-15-00	Holender et al.			
	72	6,108,309	8-22-00	Cohoe et al.			12-8-97
	73	6,111,857	8-29-00	Soliman et al.			9-11-97
	74	6,122,083	9-19-00	Ohta et al.			10-3-94
	75	6,148,010	11-14-00	Sutton et al.			6-24-98
	76	6,199,032	3-6-01	Anderson			7-22-98
	77	6,204,813	3-20-01	Wadell et al.			2-20-98

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## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
/TM/	78	6,208,833	3-27-01	Preschutti et al.			6-24-97
	79	6,229,540	5-8-01	Tonelli et al.			10-13-98
	80	6,253,086	6-26-01	Parantainen et al.			3-25-99
	81	6,285,377	9-4-01	Greenbaum et al.			6-26-97
	82	6,289,203	9-11-01	Smith et al.			2-25-98
	83	6,317,599	11-13-01	Rappaport et al.			5-26-99
	84	6,326,987	12-4-01	Alexander			12-19-00
	85	6,330,005	12-11-01	Tonelli et al.			10-6-99
	86	6,311,144	10-30-01	Abu El Ata			7-31-98
	87	6,337,688	1-8-02	Berstis			1-29-99
	88	6,338,031	1-8-02	Lee et al.			9-23-99

## FOREIGN PATENT DOCUMENTS

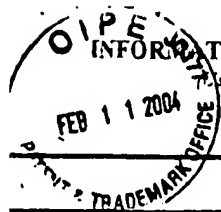
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## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	REF.	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
TM/	89	6,356,758	3-12-02	Almeida et al.			12-31-97
	90	6,393,432	5-21-02	Flansburg et al.			6-2-99
	91	6,408,312	6-18-02	Forthman et al.			8-30-99
	92	6,442,507	8-27-02	Skidmore et al.			12-29-98
	93	6,470,195	10-22-02	Meyer			10-31-00
	94	6,487,417	11-26-02	Rossoni et al.			11-24-99
	95	6,493,679	12-10-02	Rappaport et al.			5-26-99
	96	6,496,290	12-17-02	Lee			12-17-98
	97	6,499,006	12-24-02	Rappaport et al.			7-14-99
	98	6,505,045	1-7-03	Hills et al.			4-10-00
✓	99	5,586,254	12-17-96	Kondo			

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## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

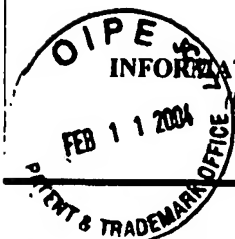

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## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
/TM/	100	6,085,335	7-4-00	Djoko et al.			12-31-97
	101	5,710,758	1-20-98	Soliman et al.			9-29-95
	102	5,821,937	10-13-98	Tonelli et al.			8-12-96
	103	5,774,669	6-30-98	George et al.			7-28-95
	104	5,802,146	9-1-98	Dulman			11-22-95
	105	5,825,759	10-20-98	Liu			7-24-95
	106	5,845,124	12-1-98	Bernan			5-1-96
	107	6,199,032	3-6-01	Anderson			7-22-98
	108	5,467,441	11-14-95	Stone et al.			10-6-94
	109	6,243,772	6-5-01	Ghori et al.			1-31-97
V	110	5,994,984	11-30-99	Stancil et al.			5-29-98

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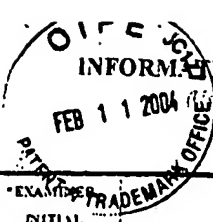
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~~unknown~~

2612

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

1	P. Bahl, V. Padmanabhan, and A. Balachandran, "A Software System for Locating Mobile Users: Design, Evaluation, and Lessons," Microsoft Technical Report, April 2000
2	G. Durgin, T.S. Rappaport, H. Xu, "Measurements and Models for Radio Path Loss and Penetration Loss in and Around Homes and Trees at 5.85 GHz," IEEE Transactions on Communications, vol. 46, no. 11, November 1998.
3	C.M. Peter Ho et al., "Antenna Effects on Indoor Obstructed Wireless Channels and a Deterministic Image-Based Wide-Band Propagation Model for In-Building Personal Communications Systems," International Journal of Wireless Information Networks, Vol. 1, No. 1, 1994.
4	S. Kim et al., "Radio Propagation Measurements and Predictions Using Three-dimensional Ray Tracing in Urban Environments at 908 MHz and 1.9 GHz," IEEE Transactions on Vehicular Technology, vol. 48, no. 3, May 1999
5	T.S. Rappaport et al., "Use of Topographic Maps with Building Information to Determine Antenna Placements and GPS Satellite Coverage for Radio Detection and Tracking in Urban Environments," MPRG Technical Report MPRG-TR-95-14, Virginia Tech, September 1995
6	R.K. Murrow, Jr. and T.S. Rappaport, "Getting In," Wireless Review Magazine, March 2000.
7	Wireless Valley Communications, Inc., "SitePlanner 3.16 for Windows 95/98/NT User's Manual," Software User's Manual, pp.5-148 to 5-156, 1999.
8	M. Panjwani et al., "Interactive Computation of Coverage Regions for Wireless Communication in Multifloored indoor Environments," IEEE Journal on Selected Areas in Communications, Vol. 14, No. 3, April 1996.
9	L. Piazzzi and H.L. Bertoni, "Achievable Accuracy of Site-Specific Path-Loss Predictions in Residential Environments" IEEE Transactions on Vehicular Technology, vol. 48, no. 3, May 1999.
10	T.S. Rappaport et al., "Wireless Communications: Past Events and a Future Perspective", IEEE Communications Magazine, May 2002.
11	T.S. Rappaport et al., "Radio Propagation Prediction Techniques and Computer-Aided Channeling Modeling for Embedded Wireless Microsystems," ARPA Annual Report, MPRG Technical Report MPRG-TR-94-12, Virginia Tech, July 1994.
12	T.S. Rappaport et al., "Use of Topographic Maps with Building Information to Determine Antenna Placements for Radio Detection and Tracking in Urban Environments," MPRG Technical Report MPRG-TR-95-14, Virginia Tech, November 1995

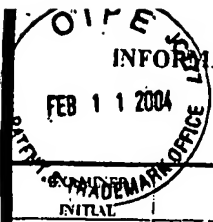
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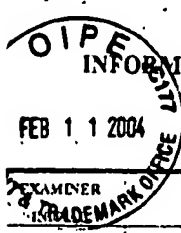
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Filing Date 11-18-03	Group Art Unit <del>unknown</del> 2612

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

/TM/	13	D. Ullmo et al., "Wireless Propagation in Buildings: A Statistical Scattering Approach," IEEE Transactions on Vehicular Technology, Vol. 48, No. 3, May 1999.
	14	T.S. Rappaport, "wireless Communications: Principles and Practice" Second Edition, Prentice Hall, 2002.
	15	T.S. Rappaport et al., "Use of Topographic Maps with Building Information to Determine Antenna Placements and GPS Satellite Coverage for Radio Detection and Tracking in Urban Environments," MPRG Technical Report MPRG-TR-95-14, Virginia Tech, September 1995.
	16	T.S. Rappaport et al., "Indoor Path Loss Measurement for Homes and Apartments at 2.4 and 5.85 GHz," private report produced for Motorola, December 16, 1997.
	17	T.S. Rappaport, "Isolating Interference," Wireless Review Magazine, May 2000.
	18	Slides from T.S. Rappaport and R. Skidmore, "Introduction to In-Building Wireless Systems," Infocast In-Building Wireless Solutions Conference and Exposition, February 4, 2003.
	19	S. Sandhu, M.P. Koushik, and T.S. Rappaport "Predicted Path Loss for Roslyn VA, First set of predictions for ORD Project on Site Specific Propagation Prediction," MPRG Technical Report MPRG-TR-94-20, Virginia Tech, December 1994.
	20	S. Sandhu, M.P. Koushik, and T.S. Rappaport, "Predicted Path Loss for Roslyn VA, First set of predictions for ORD Project on Site Specific Propagation Prediction," MPRG Technical Report MPRG-TR-94-03 Virginia Tech, March 1995.
	21	S. Seidel et al., "Site-Specific Propagation Prediction for Wireless In-Building Personal Communication Design," IEEE Transactions on Vehicular Technology, Vol. 43, No. 4, November 1994.
	22	S. Shakkottai and T.S. Rappaport, "Research Challenges in Wireless Networks: A Technical Overview," Proceeding of the Fifth International Symposium on Wireless Personal Multimedia Communications, Honolulu, HI, October 2002.
	23	H. Sherali et al., "On the Optimal Location of Transmitters for Micro-cellular Radio Communication System Design," IEEE Journal on Selected Areas in Communications, Vol. Vol. 14, No. 3, pp. 662-673, May 1996.
	24	R. Skidmore et al., "A Comprehensive In-Building and Microcellular Wireless Communication System Design Tool" The Bradley Department of Electrical Engineering, MPRG-TR-97-13, June 1997. Master's Thesis - unpublished by Virginia Tech for 2 years after submission.

EXAMINER  /Thomas Mullen/	DATE CONSIDERED  05/22/2007
---------------------------------	-----------------------------------

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Group Art Unit

Unknown 2612

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

/TM/ 24

R. Skidmore, et al., Russell Senate Office Building Propagation Study, Project Report for Joseph R. Loring & Associates; "Project Update," AoC Contract # Acbr96088, prepared for Office of the Architect of the Capitol, January 19, 1997.

/TM/ 25

R. Skidmore, et al., Russell Senate Office Building Propagation Study, Project Report for Joseph R. Loring & Associates; "Assessment and Study of the Proposed Enhancements of the Wireless Communications Environment of the Russell Senate Office Building (RSOB) and Associated Utility Tunnels," AoC Contract # Acbr96088, prepared for Office of the Architect of the Capitol, February 20, 1997.

/TM/ 26

R. Torres et al., "CINDOOR: An Engineering Tool for Planning and Design of Wireless Systems in Enclosed Spaces," IEEE Antennas and Propagation Magazine, Vol. 41, No. 4 August 1999.

/TM/ 27

R. Skidmore et al., "Interactive Coverage Region and System Design Simulation for Wireless Communication Systems in Multi-Floored Indoor Environments: SMT Plus *tm*," IEEE ICUPC Proceedings, 1996.

/TM/

T.S. Rappaport et al., "Radio Propagation Prediction Techniques and Computer-Aided Channel Modeling for Embedded Wireless Microsystems," MPRG Tech. Report MPRG-TR-95-08, Virginia Tech, July 1994.

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FEB 11 2004

02560045PA

Applicant Number

10/714,929

Applicant(s)

Rappaport et al.

Filing Date

11-18-03

Group Art Unit

unknown

2612

EXAMINER  
INITIAL

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

DATE

/TM/

Company Web Page "Actix" www.actix.com product name: E-NOS (now E-AMS)

NA/408

unknown

Company Web Page "Agilent" www.agilent.com product name: OPAS32

Company Web Page "Agilent" www.agilent.com product name: Wizard

Company Web Page "Comarco" www.edx.com product name: SignalPro

Company Web Page "ComOpt" www.comopt.com product name: CellOpt AFP

Company Web Page "Lucent" www.bell-labs.com product name: WiSE

Company Web Page "Ericsson" www.ericsson.com product name: TEMS Lite

Company Web Page "Ericsson" www.ericsson.com product name: TEMS

Company Web Page "Marconi" www.marconi.com product name: PLANET

Company Web Page "Marconi" www.marconi.com product name: decibelPlanner

Company Web Page "Schema" www.schema.com product name: Optimizer

Company Web Page "ScoreBoard" www.scoreboard.com product name: ScoreBoard

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**OTHER DOCUMENTS** (Including Author, Title, Date, Pertinent Pages, Etc.)

TM/

Article from the 56th IEEE Vehicular Technology Conference titled: In-Building Wideband Multipath Characteristics at 2.5 & 60 GHz. Vancouver Canada Aug 2002. Vol. 1 pp. 97-101. C. Anderson; T. Rappaport; K. Bae; A. Verstak; N. Ramakrishnan; W. Tranter; C. Shaffer and L. Watson

/™/

Article submitted to IEEE transactions on Wireless Communications, August 2002 titled: " Globally Optimal Transmitter Placement for Indoor Wireless Communication Systems" J. He; A. Verstak; L.T. Watson; C.A.Stinson; N. Ramakrishnan; C.A. Shaffer; T.S. Rappaport; C.R. Anderson; K Bae; J. Jiang; and W.H. Tranter

TM

Article submitted to IEEE Transactions on Wireless Communications, August 2002, titled: "In-Building Wideband Multipath Measurements at 2.5 GHz and 60 GHz" C. Anderson; T. and T. Rappaport

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DATE CONSIDERED \_\_\_\_\_

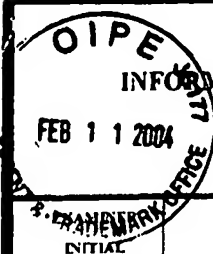
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## INFORMATION DISCLOSURE CITATION

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Docket Number (Optional)

02560045PA

Application Number

10/714,929

Applicant(s)

Rappaport et al.

Filing Date

11-18-03

Group Art Unit

~~unknown~~ 2612

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

INITIAL		Software by Andrew, titled "RF Planner" dated 6-17-97
/TM/	1	
	2	A user guide titled: "Andrew Microwave System Planner", date unknown.
	3	A user guide titled: "Andrew Antenna System Planner", date unknown.
	4	Article "Building Database Manipulator" Copyright, January 1998; MPRG and Virginia Tech
	5	PCS 97 Track 7; Engineering & Systems Management; T. Rappaport, date unknown.
	6	Propagator; Vol. 8, No. 3; Fall. 1997.
	7	SMT Plus 1.0 User's Manual; R. Skidmore & T. Rappaport; Copyright, August 1996; Virginia Tech
	8	Intel Technology Journal, vol. 7, issue 3, August 2003:
	9	S. Shakkottai et al. "Cross-Layer Design for Wireless Networks," IEEE Comm. Magazine, Vol. 41, No. 10, 10/03 Oct. 2003.
	10	IT Wireless web article, November 2003
	11	P. Tournois et al; "Pick Your Wireless Solution" web article, McCombs School of Business, Univ. of TX at Austin, date unknown.
	12	Article from Visionael website, date unknown.

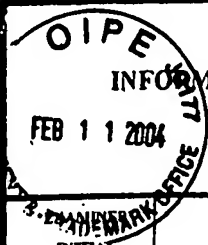
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11-18-03

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## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

/TM/

13

Article from the Chantry Networks Information website, date unknown.

14

Articles from the Aruba Networks Information website, date unknown.

15

Article from the Meru Networks Information website, date unknown.

16

Article from the Legra Networks Information website, date unknown.

17

Article from the Trapeze Networks Information website, date unknown.

18

Articles from the Airflow Networks Information website titled "Airflow Technology: Solving the WLAN Dilemma" by Brian Jenkins, July 2003; "Securing Enterprise WLANS by Dr. Harry Bims, August 2003; "Enabling Voice over WLANS by Dr. Harry Bims, September 2003; "High Availability for Mission-Critical WLANS by Brian Jenkins, September 2003, "Airflow Applications Guide

19

Articles from the Airespace Networks Information website, date unknown.

20

Article from Computerworld information website, date unknown.

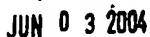
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**Appln. No. 10/714,929**

Filed: 11/18/03

Inventor(s): Rappaport, et al.

Art Unit: ~~2123~~ 2612

Examiner: ~~unknown~~ Mullen

Atty. Ref: 02560045PA

Sheet 1 of 2

## U. S. PATENT DOCUMENTS

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Appln. No. 10/714,929

Filed: 11/28/03

Inventor(s): Rappaport, et al.

Art Unit: ~~2123~~ 2612Examiner: ~~unknown~~ mullen

Atty: Ref: 02560045PA

Sheet 2 of 2

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/TM/	5	R.R. SKIDMORE ET AL, "Towards Integrated PSEs for Wireless Communications: Experiences with the S4W and SitePlanner Projects," MPRG-TR-95-08, Virginia Tech, July 1995.	
/TM/	6	J. HE, T.S. RAPPAPORT ET AL, "Global Optimization of Transmitter Placement in Wireless Communication Systems," WNCG-TR-10-07, U. Texas, October 2003.	
/TM/	7	J. CHEN, T.S. RAPPAPORT, "Cool Cloud Wireless LAN Design Guidelines and User Traffic Modeling for In-Store Use... (Part 1)," WNCG-TR-2003-11-01, U. Texas, November 2003.	
/TM/	8	CHEN NA, T.S. RAPPAPORT, "Cool Cloud Wireless LAN Design Guidelines and User Traffic Modeling for In-Store Use... (Part 2)," WNCG-TR-2003-11-02, November 2003.	

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sheet 1 of 5

Application Number 10714929

Filing Date 2003-11-18

First Named Inventor RAPPAPORT

Art Unit ~~2122~~ 2612

Examiner Name Mullen

Attorney Docket Number WV00045P01

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STATEMENT BY APPLICANT**  
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Application Number		10714929
Filing Date		2003-11-18
First Named Inventor	RAPPAPORT	
Art Unit	<del>2423</del> 2612	
Examiner Name	Mullen	
Attorney Docket Number	WV00045P01	

/TM/	1	WIRELESS VALLEY COMMUNICATIONS, INC., "SITEPLANNER 3-16 FOR WINDOWS 95/98/NT USER'S MANUAL, PP. 5-178 TO 5-156, 1999	<input type="checkbox"/>
	2	T.S. RAPPAPORT, ET AL., "WIRELESS COMMUNICATIONS: PAST EVENTS AND A FUTURE PERSPECTIVE", IEEE COMMUNICATIONS MAGAZINE, MAY 2002	<input type="checkbox"/>
	3	T.S. RAPPAPORT, "WIRELESS COMMUNICATIONS: PRINCIPLES AND PRACTICE" SECOND EDITION, PRENTICE HALL, 2002	<input type="checkbox"/>
	4	T.S. RAPPAPORT AND R. SKIDMORE, SLIDES FROM "INTRODUCTION TO IN-BUILDING WIRELESS SYSTEMS", INFOCAST IN-BUILDING WIRELESS SOLUTIONS CONFERENCE AND EXPOSITION, FEBRUARY 4, 2003	<input type="checkbox"/>
	5	S. SHAKKOTTAL AND T.S. RAPPAPORT, "RESEARCH CHALLENGES IN WIRELESS NETWORKS: A TECHNICAL OVERVIEW", PROCEEDING OF FIFTH INTERNATIONAL SYMPOSIUM ON WIRELESS PERSONAL MULTIMEDIA COMMUNICATIONS, HONOLULU, HI, OCTOBER 2002	<input type="checkbox"/>
	6	<del>R. SKIDMORE</del> R. SKIDMORE, ET AL., "A COMPREHENSIVE IN-BUILDING AND MICROCELLULAR WIRELESS COMMUNICATION SYSTEM DESIGN TOOL", THE BRADLEY DEPARTMENT OF ELECTRICAL ENGINEERING, MPRG-TR-97-13, JUNE 1997, MASTER'S THESIS - UNPUBLISHED BY VIRGINIA TECH FOR 2 YEARS AFTER SUBMISSION	<input type="checkbox"/>
	7	R. SKIDMORE, ET AL., RUSSELL SENATE OFFICE BUILDING PROPAGATION STUDY, PROJECT REPORT FOR JOSEPH R. LORING & ASSOCIATES: "PROJECT UPDATE", ANC CONTRACT #ACBR96088, PREPARED FOR OFFICE OF THE ARCHITECT OF THE CAPITAL, JANUARY 19, 1997	<input type="checkbox"/>
	8	R. SKIDMORE, ET AL., RUSSELL SENATE OFFICE BUILDING PROPAGATION STUDY, PROJECT REPORT FOR JOSEPH R. LORING & ASSOCIATES: "ASSESSMENT AND STUDY OF THE PROPOSED ENHANCEMENTS OF THE WIRELESS COMMUNICATIONS ENVIRONMENT OF THE RUSSELL SENATE OFFICE BUILDING (RSOB) AND ASSOCIATED UTILITY TUNNELS", AOC CONTRACT #ACBR96088, PREPARED FOR OFFICE OF THE ARCHITECT OF THE CAPITAL. FEBRUARY 20, 1997	<input type="checkbox"/>
	9	R. SKIDMORE, ET AL., "INTERACTIVE COVERAGE REGION AND SYSTEM DESIGN SIMULATION FOR WIRELESS COMMUNICATION SYSTEMS IN MULTI-FLOORED INDOOR ENVIRONMENTS: SMT PLUS im, IEEE ICUPC PROCEEDINGS, 1996	<input type="checkbox"/>
	10	SKIDMORE, ET AL., "TOWARDS INTEGRATED PSEs FOR WIRELESS COMMUNICATIONS: EXPERIENCES WITH THE S4W AND SITEPLANNER PROJECTS", MOBILE COMPUTING AND COMMUNICATIONS REVIEW, VOLUME 1, NUMBER 2, date unknown.	<input type="checkbox"/>
↓	11	T.S. RAPPAPORT, ET AL., "RADIO PROPAGATION PREDICTION TECHNIQUES AND COMPUTER-AIDED CHANNEL MODELING FOR EMBEDDED WIRELESS MICROSYSTEMS", MPRG TECH. REPORT MPRG-TR-95-08, VIRGINIA TECH, JULY <del>95</del> 1995.	<input type="checkbox"/>

**INFORMATION DISCLOSURE  
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3 of 5

Application Number		10714929
Filing Date		2003-11-18
First Named Inventor	RAPPAPORT	
Art Unit	<del>2429</del> 2612	
Examiner Name	Mullen	
Attorney Docket Number	WV00045P01	

/TM/	12	COMPANY WEB PAGE "ERICSSON" WWW.ERICSSON.COM, PRODUCT NAME:TEMS, <i>date unknown.</i>	<input type="checkbox"/>
	13	T. RAPPAPORT, PCS 97 TRACK 7, ENGINEERING & SYSTEMS MANAGEMENT, <i>date unknown.</i>	<input type="checkbox"/>
	14	PROPAGATOR; VOL. 8, NO. 3, FALL <i>1997,</i>	<input type="checkbox"/>
	15	R. SKIDMORE & T. RAPPAPORT; SMT PLUS 1.0 USER'S MANUAL; COPYRIGHT, AUGUST 1996, VIRGINIA TECH	<input type="checkbox"/>
	16	INTEL TECHNOLOGY JOURNAL, VOL. 7, ISSUE 3, AUGUST 2003	<input type="checkbox"/>
	17	IT WIRELESS WEB ARTICLE, NOVEMBER 2003	<input type="checkbox"/>
	18	P. TOURNOIS, ET AL., "PICK YOUR WIRELESS SOLUTION" WEB ARTICLE, MCCOMBS SCHOOL OF BUSINESS, UNIVERSITY OF TEXAS AT AUSTIN, <i>date unknown</i>	<input type="checkbox"/>
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Art Unit	<del>2423</del> 2612	
Examiner Name	Mullen	
Attorney Docket Number	WV00045P01	

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	24	ARTICLE FROM THE TRAPEZ <sup>E</sup> <sub>A</sub> NETWORKS INFORMATION WEBSITE, <i>date unknown.</i>	<input type="checkbox"/>
	25	BRIAN JENKINS, "AIRFLOW TECHNOLOGY-SOLVING THE WLAN DILEMMA", AIRFLOW NETWORKS INFORMATION WEBSITE, JULY 2003	<input type="checkbox"/>
	26	DR. HARRY BIMS, "SECURING ENTERPRISE WLANS", AUGUST 2003	<input type="checkbox"/>
	27	DR. HARRY BIMS, "ENABLING VOICE-OVER WLANS", SEPTEMBER 2003	<input type="checkbox"/>
	28	BRIAN JENKINS, "HIGH AVAILABILITY FOR MISSION-CRITICAL WLANS", SEPTEMBER 2003, AIRFLOW APPLICATIONS GUIDE	<input type="checkbox"/>
	29	ARTICLES FROM THE AIRESpace NETWORKS INFORMATION WEBSITE, <i>date unknown.</i>	<input type="checkbox"/>
	30	ARTICLE FROM COMPUTERWORLD INFORMATION WEBSITE, <i>date unknown.</i>	<input type="checkbox"/>
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	32	S. SHAKKOTTAI, T.S. RAPPAPORT, "RESEARCH CHALLENGES IN WIRELESS NETWORKS: A TECHNICAL OVERVIEW", 5TH INTERNATIONAL SYMPOSIUM ON WIRELESS PERSONAL MULTIMEDIA COMMUNICATIONS, HONOLULU, HI, OCTOBER 2002	<input type="checkbox"/>
↓	33	R.K. MORROW, T.S. RAPPAPORT, "GETTING IN", WIRELESS REVIEW MAGAZINE, MARCH 2000	<input type="checkbox"/>



**INFORMATION DISCLOSURE  
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5 of 5

Application Number	10714929
Filing Date	2003-11-18
First Named Inventor	RAPPAPORT
Art Unit	<del>2129</del> 2612
Examiner Name	Mullen
Attorney Docket Number	WV00045P01

/TM/	34	R.K. MORROW, JR., "SITE-SPECIFIC INDOOR PLANNING", APPLIED MICROWAVE AND WIRELESS MAGAZINE, MARCH 1999	<input type="checkbox"/>
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